Work Order ID 97944  March-01-13 1:51:28 PM			*9794	1					Page 1			
Revision ID: Item Name:	D2322 Step Spacer 3/01/13	Start Qty: 12.00	*12*	Accept	*N900		100	<b>)*</b>	Setup	Start Stop	111.	S1* S2*
Required Date:		Req'd Qty: 12.00	*12*		Customer:	ъ.						
Reference:				· .								
Approvals:	Process Pl	an: MC5	Date: 13-03-09	Tooling:	D	ate:		I	Run	Start	1/1	R1*
			,	SPC (Y/N):	D	ate:	<u> </u>			Stop	*N	R2*
Sequence ID/ Work Center II	)	Operation Description	-	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
Draw Nbr	Re	vision Nbr										
D2322	Re	v C										
*100*		FLOW WATER JET		0.00				(2	3	>		Jm13-4-16
Waterjet		Memo		0.00								<del></del>
2024 . 04		I-Cut as pe Deburr if ne	r Dwg D2322 Dwg Rev:_ ecessary	Prog Rev:	_ 2-							
110		QC2- Inspect parts off n	nachine FAI/FAIB	0.00								
*110* QC		Memo		0.00				12		٥		JM 13-4-1
Quality Control												
120		QC8- Inspect parts - sec	and check	000							v	
*120*		Aco- Hispeet baits - see	ond oneon	0.00 10 3 4 4				12				
QC		Memo		0.00 134, 16					•			

Quality Control

NCR:	Yes	/	No	
------	-----	---	----	--

DQA: \_\_\_\_ Date: \_\_\_\_

NCR: Y													
		,									QA Closed:	Date:	
Work Orde	r.					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	·
Part N	-					Rework Scrap Use-as-is		ı	Skid-tube Machining noforming	Crosstube Small Fab Finishing	4	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	10					Work Order Update	]		Large Fab	Composite	i Necy Stor	Supplier	
Root	П				Descri	iption of work order update	1	nitial	Ac	tion	Sign &	- <del></del>	
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
oc/Data													
quip/Tooling													
perator									-				
/laterial							İ					:	
etup													
ther													
rocess													
upplier					-		Ì						
raining 🛬										•			
Inapproved							⊥				<u> </u>		
						<del></del>	AUL	T CATE	GORY		•		
Landi	$\overline{}$				_	General		1		·	1		<b>-</b>
	_	Bending			L	Bend		Grain		<u> </u>	Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to	o/s	BOM/Route	_	Hardwa			Over/Under	<del></del>	Temperature/Cure
		Cracks				Broken/Damaged	$\perp$	1	on Incomplete		Part Incorre	<del>                                     </del>	Weld
		Crushed/0	Crimped.			Burrs		4	ions Incomplete/	'Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte			Part Moved		
		Heat Trea	t			Countersink		Mislabe	led		Positioned V	· -	7
		Inspection	n Strip in	Tube		Cut Too Short		Misread	i .		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes	<u></u>	Offset			<del></del>		
		Torque W	aves in E	xtrusio	n [	Drawing		Out of (	Calibration				
[	<u></u>	Turning Se	equence			Finish	L	Out of 9	Sequence				
	7	Wave/Twi	ist in Tub	e		Folio		Outside	Dimensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Memo

Hand Finishing

NCR: Y	es / No				WORK ORDER NON-	CONF	ORN	MANCE / UPDAT		QA Closed:	Date:	
Work Orde	r:				DISPOSITION	,			AGAINST DEF	PARTMENT		1
Part N	lo				Rework Scrap Use-as-is		ſ	Machining S	rosstube mall Fab Finishing		Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	lo		<u> </u>		Work Order Update	<u> </u>			mposite	•	Supplier	
Root				Descri	ption of work order update	Inii	tial	Action		Sign &	-	
Cause	Date	Step	Qty		or Non-conformance	Chie	f Eng	Descriptio	on	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling											•	
Operator						-						
Material												
Setup ~							• •			i :		
Other												
Process	_											
Supplier	_	[										
Training	_	1				İ						
Unapproved		<u> </u>	اا	*			CATE	CORV				
						AULT	CATE	GURY				
Landir	ng Gear			_	General					Ovalized		Pressure/Forced
	Bending			,,  -	Bend BOM/Bouts	<del></del>	rain			Ovanzed Over/Under	talaranca	Temperature/Cure
ŀ	Centre No	ot Concei	ntric to t	<sup>J/\$</sup>  -	BOM/Route		ardwa		<b> </b>	Part Incorre	<b>⊢</b>	Weld
}	Cracks	·C		<u> </u>	Broken/Damaged	-	•	on Incomplete	<del>  </del>		<del>-</del>	Wrong Stock Pulled
}	Crushed/	Crimpea.		-	Burrs	$\vdash$		ions Incomplete/Uncle nance		Part Lost/Mi Part Moved	2211R	JWTOING SLOCK Fulled
ŀ	Cuffs	••		-	Contamination	$\vdash$	iainte Iislabe			Positioned V	Vrong	
}	Heat Trea		Tuba	-	Cut Too Short	<del></del>	lisrabe Iisreac		<b>)</b>	Power Loss/		Other
}	Inspectio	•	Tube	$\vdash$	Drill Holes	$\vdash$	iisreac ffset	ı		rower toss/	Juige	Todiei
}	Ripples in		vtrucion	. –	Drawing	$\mathbf{H}$		Calibration				
1	Trorque W	vaves in t	:xtfu5!0f	1 ]	JUIAWIIIK	1 10	uluil	Janui aliun				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord March-01-13 1		944		*979	44*				Page 3
Item ID: Revision ID: Item Name: Start Date: Required Date	D2322 Step Spacer 3/01/13 :: 3/15/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*	Accept	*N9000  Cust Item II  Customer:		<b>)*</b> Setup		*NS1* *NS2*
Reference: Approvals:			Date:	Tooling: SPC (Y/N):		te:	Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 160 *160* QC Quality Control	I <b>D</b>	Operation Description QC7-Inspect Chemical Cor Memo	nversion Coat	Set Up/ Run Hours 0.00 0.00 13 S./S	Tool ID	Tool # Plan Code	Accept Re Qty Q	•	ject Insp. imber Stamp
170 <b>*17</b> Packaging Packaging		Identify as per dwg & Stock	k Location A	0.00			/2×	<del></del>	J.37
180 * <b>180</b> * QC Quality Control		QC21- Final Inspection - W	√ork Order Release	0.00			MOS	13-00	5-0/0

pl (2-05/le

												DQA:	Da	te:	
NCR:	Yes	/ No				WORK ORDER NON-	COI	<b>NFORM</b>	MANCE / UP	DATE		•			
								,				QA Closed:	Da	te:	
Work Ord	ar.					DISPOSITION	:			AGAINST D	EΙ	PARTMENT	PROCESS		
VVOIK OIU	۲۱.					Rework	7	·	Skid-tube	Crosstube			Water Jet		Engineering
Part I	No.					Scrap	1		Machining	Small Fab		Pro	d. Eng. Coor.		Quality
						Use-as-is		Therm	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR I	۷o.					Work Order Update	]		Large Fab	Composite			Supplier	L	
			<u> </u>						<b>^</b>		-	Cian 0	-	—	
Root		<u> </u>	۵.	۱		ption of work order update	1	Initial		tion ription		Sign & Date	Verificatio	n	QC Inspector
Cause	Γ.	Date	Step	Qty		or Non-conformance	Un	ief Eng	Desci	прион		Date	verificatio		QC IIIspector
Doc/Data	<u> </u>														
Equip/Tooling	-												,		
Operator Material															
Setup	<u> </u>														
Other	$\vdash$		[												
Process															
Supplier				İ											
Training								:							
Unapproved															
						F	AUL	T CATE	GORY						
Landi	ng (	Gear			<b></b>	General		,		_		1			-
	_	Bending				Bend		Grain				Ovalized			Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re	1		Over/Under	tolerance	L	Temperature/Cure
		Cracks				Broken/Damaged	L	4	ion Incomplete			Part Incorre		L	Weld
	L	Crushed/	Crimped.		_	Burrs		4	ions Incomplete/	Unclear		Part Lost/Mi	issing	L	Wrong Stock Pulled
		Cuffs				Contamination	<u></u>	Mainte				Part Moved			
		Heat Trea	it			Countersink		Mislabe	led	ļ		Positioned V	-	_	7
		Inspection	n Strip in	Tube		Cut Too Short		Misreac	t			Power Loss/	Surge	L	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

March-01-13 1:51:27 PM

Work Order ID:

97944

Parent Item:

D2322

Parent Item Name:

Step Spacer

**Start Date:** 3/01/13

Required Date: 3/15/13

**Start Qty: 12.00** 

Required Qty: 12.00

**Comments:** 

IPP Rev:A New Issue 05-11-07 JLM

IPP Rev:B Now on Waterjet 06-07-03 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040		Purchased	No			100	sf	209.2877	0.203	· <del>2.56421</del> 04			7
2024-T3 .040 sheet									. ** ***	2.6	· · · · · · · · · · · · · · · · · · ·		JM13-4-1
				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT022		209.2876922							
				1200	505	65.8254832							
				121	197	57.187894			<u></u>				
				122	136	31.78							
				1232	217	54.494315			(23)				

NCR:	Yes	/ No				WORK ORDER NON-O	100	VFOR	MANCE / UPDAT	Ε	·	<u></u>		
											QA Closed:	Date	<u> </u>	
Work Ord	or:					DISPOSITION			А	GAINST DEF	PARTMENT	PROCESS		
Part I	Part No.  NCR No.  Root Description Cause Date Step Qty					Rework Scrap Use-as-is Work Order Update			Machining Sr noforming F	mall Fab inishing mposite	Rec/Stor	Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other
Root					1	ption of work order update	1	Initial	Action		Sign &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Description	n	Date	Verification	$\dashv$	QC Inspector
Doc/Data														
Equip/Tooling	L												1	
Operator														
Material							1							
Setup			ļ										Ì	
Other				}	ļ									
Process													1	
Supplier	Г		ļ										ļ	
Training	Г		<u> </u>		ļ			-					İ	
Unapproved													$\perp$	
	<u></u>	<u> </u>	<u> </u>	·		F	AUI	T CATE	GORY					
Landi	ing (	Gear				General								
	Ē	Bending				Bend	Г	Grain			Ovalized			Pressure/Forced
		Centre N	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct [		Weld
		Crushed/	Crimped.			Burrs		Instruct	tions Incomplete/Unclea	ar	Part Lost/M	ssing		Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread Offset

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing Finish

Folio

DQA:

Part Moved

Positioned Wrong

Power Loss/Surge

Other

Date:

Turning Sequence
Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	97944
Description: Step Spacer	Part Number:	D2322
Inspection Dwg: D2322 Rev: C		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X	First Article		Prototype
---	---------------	--	-----------

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.250	+/-0.005	O.255°	٠.		V	JLMOI
4.178	+/-0.005	4.122	-		V	J
4.428	+/-0.010	4.429"	_		V	
0.250	+/-0.005	0.248"	_		ν	
6.520	+/-0.010	(0.521	_		V	
Ø0.128	+0.005/-0.000	0,139,	_		V	
R0.125	+/-0.010	0.125	-		RG	
			•			
	·					
			QA.	2,		

Measured by: Jn	Aud	dited by:	27	Prototype Approval:	N/A
Date:	3-4-16	Date:	13416	Date:	N/A

Rev	Date	Change		Revised by	Approyed
Α	04.10.12	New Issue	P/O D2582	KJ/JLM 🛠	411
					<del></del>

